

EXPERIMENTAL COMPLEMENTARY DATA USING AS A METHOD FOR GETTING MORE ACCURATE INFORMATION

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Methods for physical information extracting from any experiment data are based usually on relationships of a definite degree of generalization. Combining of two or more experiments data via more general relations gives a group of complementary experiments. Connecting each other of such experiments data help to overcome information limitation of data obtained by ordinary way. Really it means a removing of systematic deviations caused by assumed model dependence from data. Such procedure can be treated as a new virtual experiment. As a result information evaluated becomes more accurate both in statistical and more general meaning: physical information becomes more put in accordance to the objective reality.

Some special employments of this conception were developed.

In nucleon pick-up and stripping experiments on the same nucleus nuclear level spectroscopic factors (SF) are obtained by taking into account definite view of the nuclear potential in target nucleus and nucleon-nucleus interaction for incident nucleus. Meanwhile, one can connect sums of SF using quantum mechanics sum rules only. These sum rules allow one to obtain more realistic SF normalization and make definite conclusions on total momentum transferred for each SF. The stated ideas underlie to the base of the method of putting nucleon pick-up and stripping experiments data in accordance to each other. Some essential results were obtained /1/.

Exclusion of systematical disagreements between results of various photonuclear experiments was achieved using the sum $(g, xn) = (g, n) + 2(g, 2n)$ as more general relation connecting data for reactions (g, xn) , (g, n) and $(g, 2n)$ /2/. Producing of definite linear combinations or solving of system of linear equations including known and unknown data gave new information not obtained till now. An example is joint evaluation /3/ of (g, xn) , (g, n) and $(g, 2n)$ reactions cross sections for 19 nuclei from 51V to 238U.

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1. I.N.Boboshin, V.V.Varlamov, B.S.Ishkhanov, I.M.Kapitonov. The method of putting nucleon pick-up and stripping experiments data in accordance to each other (This Conference Abstract).
2. V.V.Varlamov, B.S.Ishkhanov, A.P.Chernyaev. *Izvestiya RAN SSSR, Seriya fizicheskaya*, 55 (1991) 136.
3. B.S.Ishkhanov, N.N.Peskov, M.E.Stepanov, V.V.Varlamov. Photonuclear Reactions: Systematical Disagreements and Methods of Their Overcoming (This Conference Abstract).